RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/842,347A

DATE: 12/05/2001 TIME: 10:30:46

Input Set : N:\Crf3\RULE60\09842347A.txt
Output Set: N:\CRF3\12052001\1842347A.raw

X

ENTERED SEQUENCE LISTING 4 (1) GENERAL INFORMATION: (i) APPLICANT: TAKAHASHI, Tohru 7 SERIZAWA, Nobufusa 8 KOISHI, Ryuta 9 KAWASHIMA, Ichiro 11 (ii) TITLE OF INVENTION: EXPRESSION SYSTEMS UTILIZING 12 AUTOLYZING FUSION PROTEINS AND A NOVEL REDUCING POLYPEPTIDE 13 15 (iii) NUMBER OF SEQUENCES: 19 17 (iv) CORRESPONDENCE ADDRESS: (A) ADDRESSEE: Frishhauf, Holtz, Goodman, Langer & Chick, P.C. 18 19 (B) STREET: 767 Third Avenue-25th Floor 20 (C) CITY: New York 21 (D) STATE: New York 22 (E) COUNTRY: United States 23 (F) ZIP: 10017-2023 25 (v) COMPUTER READABLE FORM: 26 (A) MEDIUM TYPE: Floppy disk 27 (B) COMPUTER: IBM PC compatible 28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS 29 (D) SOFTWARE: PatentIn Release #1.24 (vi) CURRENT APPLICATION DATA: 31 C--> 32 (A) APPLICATION NUMBER: US/09/842,347A (B) FILING DATE: 25-Apr-2001 C--> 33 34 (C) CLASSIFICATION: 43 (vii) PRIOR APPLICATION DATA: 37 (A) APPLICATION NUMBER: 08/500,635 38 (B) FILING DATE: 1995-07-11 40 (A) APPLICATION NUMBER: JP 6-218392 (B) FILING DATE: 13-SEP-1994 41 44 (A) APPLICATION NUMBER: JP 6-303809 45 (B) FILING DATE: 07-DEC-1994 47 (viii) ATTORNEY/AGENT INFORMATION: 48 (A) NAME: Goodman, Herbert 49 (B) REGISTRATION NUMBER: 17081 50 (C) REFERENCE/DOCKET NUMBER: 950376/HG 52 (ix) TELECOMMUNICATION INFORMATION: 53 (A) TELEPHONE: (212) 319-4900 54 (B) TELEFAX: (212) 319-5101 55 (C) TELEX: 236268 (2) INFORMATION FOR SEQ ID NO: 1: 60 (i) SEQUENCE CHARACTERISTICS: 61 (A) LENGTH: 1320 base pairs 62 (B) TYPE: nucleic acid

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

63

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					Out	put	set:	N:/	CRES	120	3200	1/10	4234	: /A. J	aw				ਲੇ	
	66		/ii)	MOI	LECUL	.ድ ጥሃ	PE.	CDNA	to	mRNA									1600/2900	
W>		,			POTHE					••••		ē>							93	
W>		•	•		ri-se						•	c,							8	
	72		• •		IGINA			:												
	73				A) OR				er Y	ello	w Ve	in V	'irus	3						
	75		(ix)	FE	ATURE	:														
	76			(2	A) NA	ME/K	EY:	CDS												
	77			(I	3) LO	CATI	ON:	11	320											
•	78			(I	TO (C	HER	INFC	RMAT	: NOI											
	79		(ix)	FE	ATURE	:												•		
	80	(A) NAME/KEY: mat_peptide																		
	81	(B) LOCATION: 101311																		
	82			-	-							_								
	86				QUENC														4.0	
					GGG														48	
	90	Lys 1	Pne	GIII	Gly	ьуs 5	ser	гуѕ	Arg	THE	10	GIII	гаг	ьeu	гуѕ	15	Arg	•		
		_	CCA	7 C 7	GAC		አአር	C እ ጥ	CCT	יייאייי		стс	_С у ш	GCC	CAT		GGG		96	
					Asp														50	
	94	Ата	ліа	Arg	. 20	rie c	БŽЗ	vab	nrg	25	GIU.	Val	1113	niu	30	OLU	OLY			
		ACT	тта	GTG	GAA	ААТ	ттт	GGA	ACT		TAT	TCA	AAG	AAA		AAG	ACA	-	144	
					Glu															
	98			35				-	40	_	•		•	45	-	-				
	100	AAA	GGI	' AC	r gtt	GTG	GGI	TTG	GGT	GCA	AAA	ACA	AGA	CGG	TTC	ACI	AAC		192	
•	101	Lys	Gly	Thi	r Val	Val	Gly	Leu	Gly	Ala	Lys	Thr	Arg	Arg	y Phe	Thr	Asn			
	102		50)				55	,				60)						
	104	ATG	TAT	' GG	r ttt	GAC	CCC	ACG	GAG	TAT	TCA	TTT	GCI	AGG	TAT	CTI	GAT		240	
				Gl	y Phe	Asp	Pro	Thr	Glu	Tyr	Ser	Phe	: Ala	Arg	J Tyr	Leu	Asp			
	106						70					75					80			
					G GGI														288	
			Ile	Th	r Gly			Leu	Asp	Glu) Ile	His	s Asn					
	110					85				3 073	90			3 700		95			226	
					r GAG														336	
W>			val	. Ala	a Glu n	l HIS	Pne	: СТУ	105		: Arg	те с	ı ASP) Me	vaı 110	_	ь гуз			
W/			מייים			מממי	CAG	CAC			י כיייכ	י אאר	. 202	CCI			TGT		384	
					u Asp														504	
W>				11!	_				120	_			,	125			. 0,2			
			TTT			GAT	GCT	GGT			GTG	ATC	AGG			' CTA	ACA		432	
					l Lys															
W>		_	130		-4	- 1		135		_			140		•					
			CAC	: AA	C CCA	TTG	TTG	GCA	AGC	GAT	GTI	' AGC	ACA	ACC	CATA	ATG	GGT		480	
																	Gly			
W>							150			_		155			•		160			
	128	TAT	CCI	GA	G AGA	GAA	GGI	GAA	CTC	CGI	CAA	ACI	GGA	AAC	G GCA	AGG	TTA	52	28	
	129	Tyr	Pro	Glu	u Arg	r Glu	Gly	glu,	Leu	Arg	Glr.	Thr	Gly	Lys	a Ala	Arg	Leu			
M>						165					170					175				
					A TCA													51	76	
	133	Val	Asp	Pro	o Ser	Glu	Let	Pro	Ala	Arg	, Asn	Glu	ı Asp	, Ile	e Asp	Ala	Glu			
														•						

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															100			
M>					180		~~~			185	mm.a				190	~~~		604
																CCC		624
	137	Phe	Glu		Leu	Asn	Arg	Ile		GLY	Leu	Arg	Asp		Asn	Pro	IIe	
M>				195					200					205				
																AGA		672
	141	Ser	Gln	Asn	Val	Cys	Leu	Leu	Thr	Asn	Glu	Ser	Glu	Gly	His	Arg	Glu	
M>			210					215	*				220					
																CAA		720
	145	Lys	Met	Phe	Gly	Ile	Gly	\mathtt{Tyr}	Gly	Ser	Val	Ile	Ile	Thr	Asn	Gln	His	_
M>	146	225					230					235					240	
	148	CTG	TTC	AGA	AGG	AAT	AAT	GGG	GAG	TTA	TCA	ATT	CAA	TCC	AAG	CAT	GGC	768
	149	Leu	Phe	Arg	Arg	Asn	Asn	Gly	Glu	Leu	Ser	Ile	Gln	Ser	Lys	His	Gly	
W>	150					245					250					255		
	152	TAC	TTC	AGA	TGC	CGC	AAC	ACC	ACA	AGC	TTG	AAG	ATG	CTG	CCT	TTG	GAG	816
	153	Tyr	Phe	Arg	Cys	Arg	Asn	Thr	Thr	Ser	Leu	Lys	Met	Leu	Pro	Leu	Glu	
W>	154				260					265					270			
	156	GGA	CAT	GAC	ATT	TTG	TTG	ATT	CAG	TTA	CCA	AGG	GAC	TTT	CCA	GTG	TTT	864
	157	Gly	His	Asp	Ile	Leu	Leu	Ile	Gln	Leu	Pro	Arg	Asp	Phe	Pro	Val	Phe	
W>	158			275					280					285				
	160	CCA	CAA	AAG	ATT	CGC	TTT	AGG	GAG.	CCA	AGA	GTG	GAT	GAC	AAA	ATT	GTT	912
	161	Pro	Gln	Lys	Ile	Arg	Phe	Arg	Glu	Pro	Arg	Val	Asp	Asp	Lys	Ile	Val	
W>	162		290					295					300					
	164	TTG	GTC	AGC	ACA	AAT	TTC	CAG	GAA	AAG	AGT	TCC	TCG	AGC	ACG	GTC	TCA	960
	165	Leu	Val	Ser	Thr	Asn	Phe	Gln	Glu	Lys	Ser	Ser	Ser	Ser	Thr	Val	Ser	
W>							310			_		315					320	
	168	GAG	TCC	AGT	AAC	ATT	TCA	AGA	GTG	CAG	TCA	GCC	AAT	TTC	TAC	AAG	CAT	1008
	169	Glu	Ser	Ser	Asn	Ile	Ser	Arg	Val	Gln	Ser	Ala	Asn	Phe	Tyr	Lys	His	
W>						325		-			330					335		
	172	TGG	ATC	TCA	ACA	GTA	GCA	GGA	CAC	TGT	GGA	AAC	CCT	ATG	GTT	TCG	ACT	1056
																Ser		
W>		_			340			_		345	_				350			
	176	AAA	GAT	GGA	TTT	ATT	GTA	GGT	ATC	CAC	AGT	CTT	GCT	TCA	TTG	ACA	GGC	1104
	177	Lys	Asp	Gly	Phe	Ile	Val	Gly	Ile	His	Ser	Leu	Ala	Ser	Leu	Thr	Gly	
W>		_	_	355				_	360					365			_	
	180	GAC	GTT	AAC	ATC	TTC	ACA	AGC	TTT	CCG	CCG	CAG	TTT	GAG	AAC	AAA	TAT	1152
																Lys		
W>		_	370					375					380			-	-	
	184	CTA	CAG	AAG	CTC	AGT	GAA	CAC	ACA	TGG	TGT	AGT	GGA	TGG	AAA	CTA	AAT	1200
																Leu		
W>				-			390			-	-	395	-	-	-		400	
			GGA	AAG	ATT	AGT		GGT	GGA	ATC	AAC		GTG	GAG	GAT	GCA	CCT	1248
																Ala		
W>			-	-		405	•	•	•		410				-	415		
		GAA	GAG	CCC	TTT		ACA	TCC	AAG	ATG		AGC	CTT	CTT	AGT	GAT	TTG	1296
																Asp		
W>					420				_1 _	425					430	P		
,		ААТ	TGT	TCA		CAA	GCA	AGT	GCG	-29								1320
								Ser							•			
W>			-1-	435					440									

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201 203 204 205 206 208 210 211 213	(A) LENGTH: 440 amino acids (B) TYPE: amino acid (D) TOPOLOGY: linear (ii) MOLECULE TYPE: protein (vi) ORIGINAL SOURCE: (A) ORGANISM: Clover Yellow Vein Virus														;	
214			(]	A) N2	AME/I	KEY:	mat_	_pept	tide							
215					CAT:											
216		(D) OTHER INFORMATION:														
219		(xi) SE	QUEN	CE DE	ESCR:	IPTIC	ON: S	SEQ I	D NO	2: 2	:				
221	Lys	Phe	Gln	Gly	Lys	Ser	Lys	Arg	Thr	Arg	Gln	Lys	Leu	Lys	Phe	Arg
222	1			_	5		_	-		10		_		_	15	-
224	Ala	Ala	Arg	Asp	Met	Lys	Asp	Arg	Tyr	Glu	Val	His	Ala	Asp	Glu	Gly
225			_	20		_	_	•	25					30		
227	Thr	Leu	Val	Glu	Asn	Phe	Gly	Thr	Arg	Tyr	Ser	Lys	Lys	Gly	Lys	Thr
228			35				_	40	-	_		_	45	_	_	
230	Lys	Gly	Thr	Val	Val	Gly	Leu	Gly	Ala	Lys	Thr	Arg	Arg	Phe	Thr	Asn
231	_	50				_	55	_		_		60	_			
233	Met	Tyr	Gly	Phe	Asp	Pro	Thr	Glu	Tyr	Ser	Phe	Ala	Arg	Tyr	Leu	Asp
234	65	_	_		_	70			_		75	·				80
236	Pro	Ile	Thr	Gly	Ala	Thr	Leu	Asp	Glu	Thr	Pro	Ile	His	Asn	Val	Asn
237				_	85			_		90					95	
239	Leu	Val	Ala	Glu	His	Phe	Gly	Asp	Ile	Arg	Leu	Asp	Met	Val	Asp	Lys
240				100					105					110		
242	Glu	Leu	Leu	Asp	Lys	Gln	His	Leu	Tyr	Leu	Lys	Arg	Pro	Ile	Glu	Cys
243			115					120					125	,		
245	Tyr	Phe	Val	Lys	Asp	Ala	Gly	Gln	Lys	Val	Met	Arg	Ile	Asp	Leu	Thr
246		130					135					140				
248	Pro	His	Asn	Pro	Leu	Leu	Ala	Ser	Asp	Val	Ser	Thr	Thr	Ile	Met	Gly
	145					150					155					160
251	Tyr	Pro	Glu	Arg	Glu	Gly	Glu	Leu	Arg	Gln	Thr	Gly	Lys	Ala	Arg	Leu
252					165					170					175	
	Val	Asp	Pro		Glu	Leu	Pro	Ala	Arg	Asn	Glu	Asp	Ile		Ala	Glu
255				180					185					190		
	Phe	Glu	Ser	Leu	Asn	Arg	Ile		Gly	Leu	Arg	Asp	_	Asn	Pro	Ile
258			195					200					205			
	Ser		Asn	Val	Cys	Leu	Leu	Thr	Asn-	Glu	Ser	Glu	Gly	His	Arg	Glu
261		210					215					220				
	_	Met	Phe	Gly	Ile	_	Tyr	Gly	Ser	Val		Ile	Thr	Asn	Gln	
	225					230					235					240
	Leu	Phe	Arg	Arg		Asn	Gly	Glu	Leu		Ile	Gln	Ser	Lys		Gly
267					245					250					255	
	Tyr	Phe	Arg	_	Arg	Asn	Thr	Thr	Ser	Leu	Lys	Met	Leu		Leu	Glu
270				260	_	_			265	_		_		270		
	Gly	His		Ile	Leu	Leu	Ile		Leu	Pro	Arg	Asp		Pro	Val	Phe
273			275					280					285			

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275 Pro Gln Lys Ile Arg Phe Arg Glu Pro Arg Val Asp Asp Lys Ile Val
                                 295
     278 Leu Val Ser Thr Asn Phe Gln Glu Lys Ser Ser Ser Ser Thr Val Ser
                             310
                                                 315
     281 Glu Ser Ser Asn Ile Ser Arg Val Gln Ser Ala Asn Phe Tyr Lys His
                        325
                                             330
     284 Trp Ile Ser Thr Val Ala Gly His Cys Gly Asn Pro Met Val Ser Thr
                    340
                                         345
     287 Lys Asp Gly Phe Ile Val Gly Ile His Ser Leu Ala Ser Leu Thr Gly
     288 355
                                     360
                                                         365
     290 Asp Val Asn Ile Phe Thr Ser Phe Pro Pro Gln Phe Glu Asn Lys Tyr
                                 375
     293 Leu Gln Lys Leu Ser Glu His Thr Trp Cys Ser Gly Trp Lys Leu Asn
                             390
                                                 395
     296 Leu Gly Lys Ile Ser Trp Gly Gly Ile Asn Ile Val Glu Asp Ala Pro
     297
                         405
                                             410
     299 Glu Glu Pro Phe Ile Thr Ser Lys Met Ala Ser Leu Leu Ser Asp Leu
                     420
                                         425
    302 Asn Cys Ser Phe Gln Ala Ser Ala
     303
             435
     305 (2) INFORMATION FOR SEQ ID NO: 3:
     307
         (i) SEQUENCE CHARACTERISTICS:
     308
                  (A) LENGTH: 25 base pairs
     309
                   (B) TYPE: nucleic acid
     310
                   (C) STRANDEDNESS: single
                   (D) TOPOLOGY: linear
     311
     313
           (ii) MOLECULE TYPE: other nucleic acid, synthetic DNA
W--> 315
            (iii) HYPOTHETICAL: N
W--> 317
            (iv) ANTI-SENSE: N
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
     321
                                                                              25
     323 GTCCATGGGG AAAAGTAAGA GAACA
     325 (2) INFORMATION FOR SEQ ID NO: 4:
             (i) SEQUENCE CHARACTERISTICS:
     327
     328
                   (A) LENGTH: 20 base pairs
     329
                   (B) TYPE: nucleic acid
     330
                   (C) STRANDEDNESS: single
     331
                   (D) TOPOLOGY: linear
            (ii) MOLECULE TYPE: other nucleic acid, synthetic DNA
     333
W--> 335
            (iii) HYPOTHETICAL: N
W--> 337
           (iv) ANTI-SENSE: N
     341
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                                              20
     343 ACTCTGAGAC CGTGCTCGAG
     345 (2) INFORMATION FOR SEQ ID NO: 5:
             (i) SEQUENCE CHARACTERISTICS:
     348
                   (A) LENGTH: 20 base pairs
     349
                   (B) TYPE: nucleic acid
     350
                   (C) STRANDEDNESS: single
     351
                   (D) TOPOLOGY: linear
     353
           (ii) MOLECULE TYPE: other nucleic acid, synthetic DNA
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/842,347A TIME: 10:30:47

DATE: 12/05/2001 ·

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L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
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L:70 M:246 W: Invalid value of Alpha Sequence Header Field, [ANTI-SENSE:], SeqNo=1
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L:174 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
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L:182 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
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Input Set : N:\Crf3\RULE60\09842347A.txt Output Set: N:\CRF3\12052001\1842347A.raw

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